



WORLD
bioeconomy
FORUM

THE BIOECONOMY CELEBRATES NATURE

The second World BioEconomy Forum

11–13 September 2019 in Ruka, Finland



Valmet 
FORWARD

 **PÖYRY**

advisory board

The World BioEconomy Forum Advisory Board is chaired by **Jukka Kantola**, and includes several accomplished bioeconomy experts.



World BioEconomy Forum

info@wcbef.com
www.wcbef.com
twitter: @BioeconomyForum

Jukka Kantola

Chairman of the Advisory Board
+358 40 552 8880
jukka.kantola@wcbef.com

Anna Nikkilä

Program assistant
anna.nikkila@wcbef.com

Aida Greenbury

Global Sustainability and Outreach
aida.greenbury@wcbef.com

Mark Rushton

Media Consultant
mark.rushton@wcbef.com

Henrik Kantola

Project assistant
henrik.kantola@wcbef.com

cover: Kalliosaari,
Kitkajoki, Kuusamo,
photo: Kimmo Salminen



Dr. Christian Patermann

"Father" of European bioeconomy, Former Director EU Commission and Advisor to the German Government on bioeconomy matters

Jim Philip

Policy Analyst,
Directorate for Science,
Technology and Innovation, OECD

Aida Greenbury

Sustainability Advisor

Mark Rushton

Media Consultant and Senior Editor



Pentti Hyttinen

Director General of Metsähallitus (Finnish state forest enterprise)

Michael Carus

Founder and Managing Director of nova-Institute

Mika Aalto

Director General, Chemical Industry Federation of Finland

Mario Bonaccorso

Founder and Editor in Chief of Il Bioeconomista



Ludo Diels

Research Manager, Sustainable Chemistry, Flemish Institute for Technological Research (VITO)

Antti Asikainen

Executive Vice President, Research, Natural Resources Institute Finland (Luke)

Teresa Presas

The Navigator Company Board Member, former Director General of CEPI - Confederation of European Paper Industries

Dear FORUM PARTICIPANT,

IT IS ALREADY THE SECOND TIME

we are gathering for World BioEconomy Forum in Ruka, Finland. The event is even more international and topical than last year. On behalf of the Advisory Board and the supporters of World BioEconomy Forum, I'd like to warmly welcome you to Ruka.

THE YEAR HAS GONE BY FAST.

We have witnessed the importance of circular bioeconomy. IPCC released its alarming report in October 2018, stating that global warming needs to be stopped at 1,5°C and that drastic measures are needed now. European Union announced its update on the current bioeconomy strategy, emphasizing speeding up the bioeconomy. Forest fires are yet again causing enormous damages in several areas, such as Brazil, Russia, and the Canary Islands - much like we witnessed in the USA last year.

But beside these alarming issues, we are also seeing a glimpse of the future progress through some positive news.

CONSUMER AWARENESS for the climate change is increasing and consumers are looking for sustainable solutions to replace applications based on fossil fuels. We have seen big brand houses actively seeking out sustainable options, and regulators are setting frames to speed up the development of circular bioeconomy.

These are all issues that will be on the table during the BioEconomy Forum in Ruka. We are happy to once again have a very impressive list of speakers from all over the world to discuss holistic views on circular bioeconomy and climate change.

WE ARE CONSTANTLY TRYING TO

make bioeconomy explicit. Last year we discussed textiles, and this year we will be looking into plastics. We will be hearing market views as well as how institutes are developing new bio-based products and how new companies are approaching bio-based materials. Climate change and its effects will be addressed not only in panels, but also during the theme dinner on Thursday. High-level policies mixed with tangible cases create an interesting basis for discussion.

On behalf of the Advisory Board I warmly welcome you to the 2nd World BioEconomy Forum in Ruka, Finland. Looking forward to vivid dialog between different actors!



Jukka Kantola

Chairman of the Advisory Board



KUUSAMO - a carbon neutral and zero-waste region



Here in Kuusamo, in matters regarding the environment, the discussion often focuses on short-term goals. Today, the growth of timber exceeds the amount of felled timber in our forests.

A new industrial area masterplan for this area has been completed. Work on the first investments may begin next year. A new wastewater treatment plant already stands in the area, and plans for new investments in various waste treatment systems are underway. There will also be an area where willow will be grown. We hope that willow may become a solution for the removal of microplastics and medicines from wastewater. In addition, there will be equipment for making granules from ashes. Those granules can be used in forest fertilization.

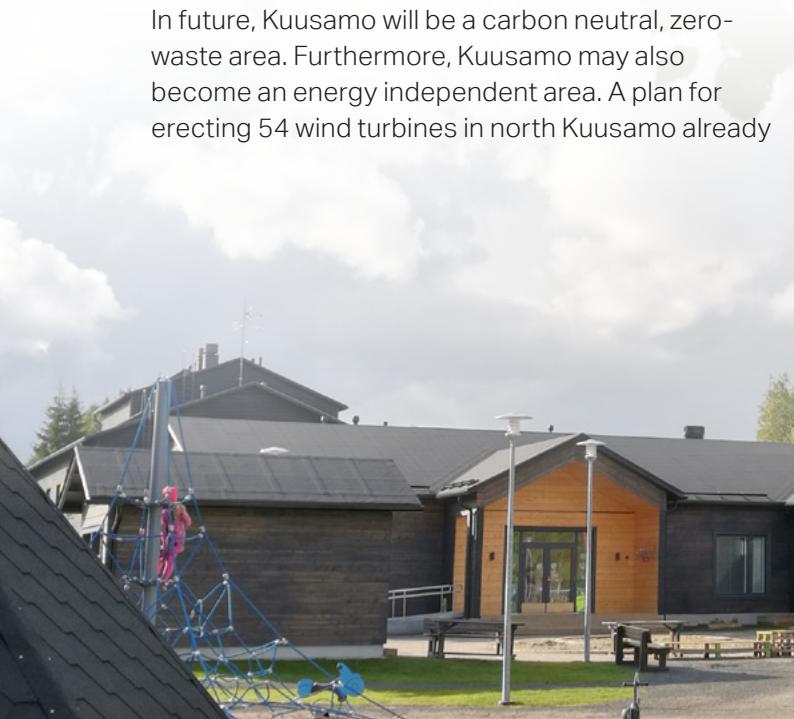
In future, Kuusamo will be a carbon neutral, zero-waste area. Furthermore, Kuusamo may also become an energy independent area. A plan for erecting 54 wind turbines in north Kuusamo already

exists. When completed, the energy production of this wind farm will be equivalent to four times the electricity consumption of Kuusamo.

Ecosystems on the Arctic Circle region are sensitive, but also filled with resources. Creative and responsible uses of these resources are the key to the region's prosperity. Sustainable forestry and wood processing industry are the most important growing businesses for us. Local companies such as the Pölkky sawmill and Kuusamo Log Houses are major operators on both domestic and global markets.

We are honoured to have you here as our guests. I wish you all an exciting, successful, and enjoyable seminar with us.

Jouko Manninen
Mayor, Kuusamo Town



Day-care centre Otso in Kuusamo town centre.
The log walls of the building will act as an effective carbon storage for decades to come.



KEYNOTE SPEAKERS



The bioeconomy strategy of the EU

Elisabetta Balzi

The head of the
bioeconomy unit in the
European Commission



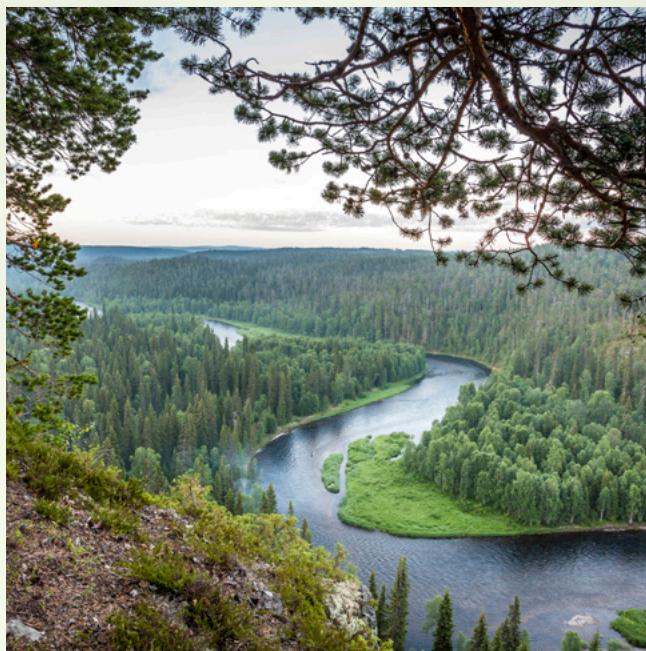
Nils Torvalds

Member of the European
Parliament



RUKA INFO

Every visit to Ruka and Kuusamo is the beginning of a new adventure, where unique experiences come to life to the rhythm of the changing seasons. Many who have experienced the magic of one winter or summer holiday here are already planning their next escape into Kuusamo's thrilling wilderness. Find more: www.ruka.fi



Ruka is one of the biggest and most popular ski resorts in Finland, offering superb family holidays in winter and summer. Finland is mentioned on Lonely Planet's list of Best in Travel 2017 Top Countries especially for its 100 years of independence. Part of the celebration was the opening of the 40th national park Hossa in June 2017. Hossa National Park stretches through Kuusamo and Suomussalmi; Julma Ölkkä canyon lake is located in Kuusamo.



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Panel 1

Implementing bio-strategies



Moderator

Dr Christian Patermann

Day 1

Wednesday, September 11, 2019

14:00 Registration opens

16:00 Conference Opening

17:00 Panel 1: Implementing Biostrategies

19:00 Buses leaving from Conference Center
for dinner

19:30 Get Together Dinner



The biostrategy in Italy and its implementation

Mario Bonacorso

The founder and Editor in chief,
Il Bioeconomista



The implementation of Austria's new biostrategy

Isabella Plimon

The Director for Innovative
Technologies and Bioeconomy
at the Austrian Federal Ministry
for Sustainability and tourism



UK's Latest biostrategy update and its implementation

Paul Henderson

Head of Bioeconomy and
Plastics at the UK Department
of Business, Energy and
Industrial Strategy (BEIS)



The local bioeconomy in the Basque Region

Bittor Oroz

Deputy Minister of Agriculture,
Fisheries and Food Policy of
the Basque Government



The efforts to advance the forest bioeconomy in Michigan

Dr Mark Rudnicki

The Executive Director of the
Michigan Forest Biomaterials
Institute (MiFBI)



Local Bioeconomy in North Ostrobothnia

Pauli Harju

Region Mayor,
Council of Oulu region





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Panel 2

Forest bioeconomy and climate change



Moderator
Aida Greenbury

Day 2

Thursday, September 12, 2019

- 9:00** Seminar continues
- 9:15** Panel 2: Forest bioeconomy and climate change
- 10:45** Panel 3: CEO Panel
- 12:15** Lunch - Sponsored by the Town of Kuusamo
- 13:15** Panel 4: Circular Bioeconomy – Enterprise Panel
- 14:30** Coffee break
- 15:00** Panel 5: Evolving value chains based on bio-feedstock – Case Plastics
- 19:00** Theme Dinner – Carbon Neutral



Forests and Climate change
Antti Asikainen
Executive Vice President,
Research, Natural Resources Institute Finland (Luke)



Climate change and forest bioeconomy in Brazil from an agricultural viewpoint
Marcello Brito
President of the Brazilian Agribusiness Association (ABAG)



The requirements of forest bioeconomy
Lauri Hetemäki
Assistant Director of the European Forest Institute (EFI)



The role of forests and global solutions to deforestation
Grant Rosoman
Senior Advisor,
Greenpeace International

In Kuhmo we trust in the sound forestry of Kainuu, strong Finnish craftsmanship and state of the art technology.



Panel 3

CEO Panel



Moderator
Teresa Presas



Steering a company in today's evolving, global bioeconomy
Berry Wiersum
CEO, Sappi Europe



The financial side of bioeconomy and the future of the forest industry

Rainer Häggblom
Chairman of Häggblom & Partners Ltd



Huge variety of biosolutions – where to go, when and how?

Nicholas Oksanen
Executive Vice President and Head of Process Industries Division, Pöyry



BioEconomy transforms company's strategy

Anatoly Frishman
CEO, Sveza



Biorefineries offer sustainable solutions
Elisabeth Stanger
Head of Marketing / Business Development, Global Pulp&Wood, Lenzing

Panel 4

Circular Bioeconomy



Moderator
Mika Aalto



Innovation and carbon capturing
Freya Burton
Chief Sustainability and People Officer, LanzaTech



Biorefinery technologies, their sustainable applications and how they can be implemented around the world

Tomi Honkala
CEO, Chempolis Ltd



Biorefineries and how they can reduce carbon footprints and the dependency on finite resources

Dennis Chafîa
Business Development Manager, G.I. Dynamics



Waste cellulose conversions to value-added products – from kgs to tonnes"

Tony Duncan
CEO, Circa Group



The processes aimed at enabling the use of currently underutilized raw material streams

Hanna Karlsson
LignoBoost technology manager, Valmet

Panel 5

Evolving value chains based on bio-feedstocks - Case Plastics



Moderator
Michael Carus



Replacing paper and plastics
Tuomas Mustonen
Founder and CEO, Paptic



The applications of nanocellulose
Fredrik B. Rosén
Vice President, Market Strategy and Business Development at Bioeconomy Division of Research Institutes of Sweden (RISE)



Research and Development of Circular Bioplastics at VTT
Anna Tenhunen
Senior Scientist, Project Manager, VTT



Biobased materials in the New Plastics Economy
Maija Pohjakallio
Sulapac



BBI programs in bioplastics
Philippe Mengal
Executive Director of the Bio-based Industries Joint Undertaking (BBI JU)



Evolving biomaterials – case USA
Robert M. Baldwin, PhD
National Renewable Energy Laboratory (NREL)



DAY 3

Friday, September 13, 2019

9:00 Small Group Discussions

10:00 Steps forward – Seminar conclusions

11:00 Lunch / Press conference – Sponsored by the Council of Oulu region

12:15 Bus transportation to the airport



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and circular solutions is high
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PORT
OUTU

A
HERE'S A FRESH
PERSPECTIVE
ON SUSTAINABLE PRODUCTION

**WHEN YOU LOOK AT A CHALLENGE
FROM DIFFERENT ANGLES, YOU
FIND A BETTER SOLUTION.**

Take the issue of sustainable production, for example. Sustainability is more than

using renewable resources. It requires systems that eliminate waste, are safe for people to operate and maintain, use less energy, keep harmful pollutants out of the air and water, create profits, and

fit well into local communities. We are your technology and service partner. When you need a fresh perspective on sustainability, let ANDRITZ open up new possibilities for you.

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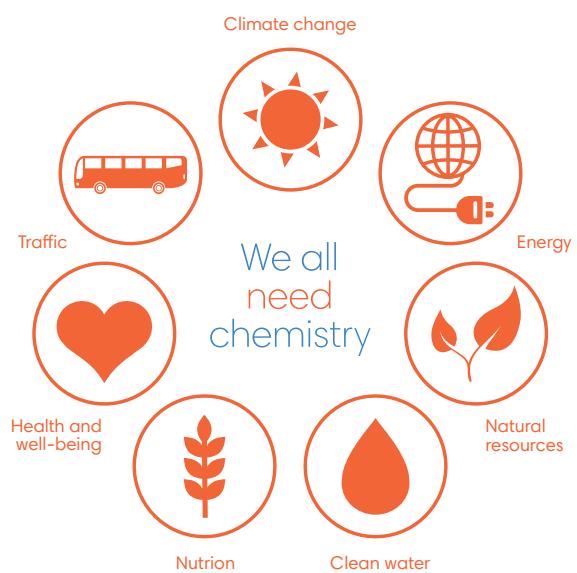
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Council of Oulu Region



Biofuels for transport from sustainably managed forests

The NordFuel is a unique project in second generation (2G) bioethanol and biomethane development targeting Northern and Central European markets. Together, the long-term demand prospects for 2G-biofuels, size of the NordFuel initiative and benefits from existing infrastructure at site form a truly one of its kind renewable energy project.

The NordFuel project is being developed by Kanteleen Voima Oy, a Finnish power producer with 28 private and municipal

energy companies as its owners. In addition to other operations, Kanteleen Voima Oy operates a power plant in Haapavesi where the NordFuel project is located.

The power plant and related infrastructure at the Haapavesi site have significant positive impact to the feasibility of the NordFuel project. The site is optimally located with an excellent access to raw material and with five export ports (Oulu, Raahe, Kalajoki, Kokkola and Pietarsaari) located close by the site.

National Renewable Energy Laboratory (NREL) – Golden, Colorado, USA

The National Renewable Energy Laboratory (NREL) is the US Department of Energy's preeminent national laboratory with a mission focused on renewable energy and materials. The Bioenergy Program in the BioEnergy Science and Technology (BEST) directorate supports research and development that focuses on biomass characterization, thermochemical and biochemical biomass conversion technologies, biobased products development, and biomass process engineering and analysis including sustainability and life cycle assessment

(<https://www.nrel.gov/bioenergy/index.html>). Core competencies of the BEST directorate include: 1) biomass characterization; 2) biochemical conversion; 3) thermochemical conversion; 4) chemical and catalyst science; 5) microalgal biofuels and bioenergetics; 6) technoeconomic analysis and sustainability assessment. Researchers in BEST work to develop cost-effective, environmentally friendly biomass conversion technologies to reduce our nation's dependence on foreign oil, improve our air quality, and support rural economies.



vttresearch.com/services/bioeconomy



#tilaaatarioille



Kuusamo, a brave and pioneering town full of life and generous emotion, with many colourful faces shaped by the rugged nature and mystique of the north.

In Kuusamo, our eyes reach far into the future. This town has plenty room to live and breathe, to build families and businesses. Kuusamo has a big heart, big enough for all of us.

In Kuusamo, there is room for new stories.



Making future



ÅF Pöry's engineers and consultants know the whole bioindustry value chain from biomass to market drivers, megatrends and business partners.

We help identify value added opportunities as well as those not worth pursuing and commercialise bioproducts with engineering solutions that meet the highest profitability, sustainability and HSE criteria.